R

PROPHYLAXIS
of
RABIES
Pasteur Method

OF PHILADELPHIA

RABIES VACCINE

PREPARED BY
LEDERLE ANTITOXIN LABORATORIES
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RABIES

NATURE OF THE DISEASE: Rabies is transmitted to human beings through inoculation with virus from infected animals—usually dogs. The saliva of the animal is the infecting medium which conveys the poison. When infection occurs, following the bite of a rabid animal, no symptoms—apart from the wound—are noted for a variable length of time, depending upon the severity of the bite, location of the wound, etc. A wound from a bite on the head is usually followed by symptoms of the disease within a shorter period than a wound on the hand or foot. The period of time that elapses between the biting by the animal and the development of symptoms in the individual is known as the period of incubation. This varies from ten days to six months or longer—the majority of cases occur before the end of the third month—the average time being about seventy-two days.

SYMPTOMS IN THE DOG: Rabies presents at least two clinical types: these are the excited, and the paralytic. It is important that the early symptoms of rabies in the dog be recognized; for the bite of a dog may communicate the disease three or five days prior to the development of symptoms in the dog. At this stage, the animal may be playful and affectionate to an unusual degree; he desires to be recognized and petted. Later, there is a marked change in the voice to a hoarse howl, followed by an unequal series of barks, lower in pitch than is normal. The rabid dog becomes restless, lying down and getting up again repeatedly. He is easily startled, growls and barks on slight provocation.

In the excited type, the dog may suddenly leave home, wandering off for many miles, to return in a day or two, emaciated, wounded, and utterly changed. During the period of running mad, he may have bitten many persons and animals. He does not fight other dogs, but bites them and passes on. The dog looks sick, and takes no interest in his surroundings. It is the rule that dogs in this condition have no appetite for their accustomed food and frequently swallow indigestible objects. Swallowing is difficult and, later in the disease, impossible. Convulsions now appear, and the dog may die in one. More frequently a paralytic stage supervenes: the animal drags himself to a secluded spot; the hind legs become paralyzed first, giving the impression that the spine is injured. Saliva drools from the mouth and the dog becomes much emaciated.

The paralytic form is quite frequent among dogs and offers peculiar danger to man. These are the cases where the owner or bystander endeavors to remove an imaginary bone from the throat and becomes bitten. Spasms of deglutition and paralysis of the throat muscles strongly suggest an obstruction in the throat. It is a mistake to suppose that rabid dogs have any fear of water. They are intensely thirsty and desire to drink, but when the paralytic condition affects the throat muscles they are unable to swallow. They are so far from having a fear of water that they sometimes swim rivers while in the excited stage, as observed in ancient and modern times. The term hydrophobia—meaning fear of water—is a misnomer, and should be discarded.

THE CAUSE OF RABIES: At the present time a belief is growing that the cause of rabies is a parasitic protozoan discovered by Negri and generally known as the "Negri body." His discovery has been amply confirmed and most observers agree with his interpretation of the nature of the bodies as well as their significance.

The fact that the disease is transmitted through bites of rabid animals—not only of dogs, but of other animals as well—led to the discovery that the causative agent is actually present in the saliva. Subsequently, it was found that this causative agent, or rabies virus, would be destroyed by heating the saliva, by adding certain chemicals, or by exposing the saliva to sunlight. It was further shown that it is possible to filter out the virus by forcing the saliva through a very fine porcelain filter. The presence of the virus in its purest form can be demonstrated in the substance of the spinal cord and brain. It is also present in the saliva and salivary glands; and frequently in the milk and mammary glands, and in the lachrymal secretion and glands. Hence, in performing an autopsy upon a rabid animal, care must be exercised not to come in contact with the saliva, brain, spinal cord, or other secretions and tissues which contain the virus; especially when the person has wounds, cuts, or open sores through which the virus may gain entrance.

CARE OF ANIMAL: If the animal is dead its head and about four inches of the neck should be severed from the body and sent to a State, Municipal or other diagnostic laboratory for examination. If the animal is alive, every possible effort should be made to keep the animal securely confined and under observation for at least two weeks, or longer if possible. When an animal is killed in the early stages of the disease, the changes sought for in the brain as indicative of rabies, are likely to be entirely absent; and if these changes are not found in an animal killed early in the course of the disease, it does not indicate that the animal did not have rabies. The saliva may have contained the virus at the time of the biting, and the person bitten may be dangerously infected with the disease; for the saliva may contain the virus several days before the animal shows symptoms of the disease. Hence, rabies may result from the bite of an animal apparently normal at the time of inflicting the wound. Therefore, any animal suspected of rabies should be securely confined and kept under observation.

RABIES VACCINE

PREPARATION: The vaccine is prepared after the method of Pasteur. The spinal cords, from rabbits which have been infected with fixed rabies virus for eight days, are suspended over a layer of potassium hydroxide and kept at a temperature of 22° Centigrade from one to eight days. As a result of this drying process, the virus in the substance of the cords is gradually weakened or attenuated. In the preparation of each dose of Rabies Vaccine, a portion of a rabbit's cord is emulsified by grinding under aseptic conditions with glycerin, and filled into vials; each vial containing sufficient material for one dose. Cords with virus of various strengths are freshly prepared and kept in constant readiness for the preparation of Rabies Vaccine to meet all emergencies.

INDICATIONS: Rabies Vaccine is used for the preventive treatment of rabies during the incubation period. After symptoms of the disease are fully developed, antirabic treatment is of absolutely no value. A cure for rabies is as yet undiscovered, but the Pasteur treatment is effective in preventing the development of the disease in persons bitten by rabid dogs but the treatment should be started at once. On account of the long period of time sometimes necessary for the positive diagnosis to be made from the animal, the disease may have gained incurable headway, therefore, in suspicious cases the treatment should be started without waiting for diagnosis. It is important that the treatment of the bitten individual be taken within one week of the bite if possible.

HOW TO SECURE TREATMENT: Because of the perishable nature of Rabies Vaccine, it is not carried in stock by druggists and orders for the treatment should be telegraphed by the physician or his druggist either to Schieffelin & Co., 170 William Street, New York City, or to the Lederle

Antitoxin Laboratories, Pearl River, N. Y., stating age of patient, date, location and severity of the bite and full name and address of physician to whom treatment is to be sent.

The antirabic treatment consists of the injection of 25 doses of Rabies Vaccine, the injections being given daily for twenty-one successive days. Immediately upon receipt of the order the first three doses are shipped; the second day doses 4 and 5 are shipped; the third day doses 6 and 7 are shipped, and for the next 18 days a dose is shipped daily from dose No. 8 to No. 25. Doses for Sundays or holidays are shipped to arrive the day before.

DIRECTIONS: Complete directions for use of the Vaccine, together with chart for case record, will be included with first shipment.

CARE OF PATIENT: All wounds should be cauterized as soon as possible. It is never too late to derive some benefit from cauterizing. Thorough cleansing with antiseptic solutions should be followed by the application of undiluted formalin or nitric acid; and an aseptic dressing may then be applied.

The bowels should be kept freely open during the course of treatment and the drinking of tea, coffee and alcoholic beverages allowed but sparingly. While taking the antirabic treatment, patients are ordinarily able to attend to their work. Exposure to cold, especially excessive bathing, should be avoided during the course of treatment. Some local soreness, together with erythema about the site of the injection may occur. If these signs of reaction are marked, the application of a wet dressing of aluminum acetate solution will be found useful. Slight malaise may also be felt.

PRICE: The price of the complete treatment in our special Vial package, containing the regular Lederle Vials, is $25.00. The code word for use in ordering is "Rind."

We also offer the complete treatment in the regular syringe style package at $50.00. The code word for this style package is "Rave."

The Vaccine is, of course, the same in either style package.

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